

Sequence Listing

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<120> Humanized Anti-ErbB2 Antibodies and Treatment with
Anti-ErbB2 Antibodies

<130> P1467R2

<141> 2000-06-23

<150> US 60/141,316

<151> 1999-06-25

<160> 13

<210> 1

<211> 107

<212> PRT

<213> Mus Musculus

<400> 1

Asp	Thr	Val	Met	Thr	Gln	Ser	His	Lys	Ile	Met	Ser	Thr	Ser	Val
1				5					10					15

Gly	Asp	Arg	Val	Ser	Ile	Thr	Cys	Lys	Ala	Ser	Gln	Asp	Val	Ser
				20					25					30

Ile	Gly	Val	Ala	Trp	Tyr	Gln	Gln	Arg	Pro	Gly	Gln	Ser	Pro	Lys
				35					40					45

Leu	Leu	Ile	Tyr	Ser	Ala	Ser	Tyr	Arg	Tyr	Thr	Gly	Val	Pro	Asp
				50					55					60

Arg	Phe	Thr	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Phe	Thr	Ile
				65					70					75

Ser	Ser	Val	Gln	Ala	Glu	Asp	Leu	Ala	Val	Tyr	Tyr	Cys	Gln	Gln
				80					85					90

Tyr	Tyr	Ile	Tyr	Pro	Tyr	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu
				95					100					105

Ile Lys

<210> 2

<211> 119

<212> PRT

<213> Mus musculus

<400> 2

Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys	Pro	Gly
1				5					10					15

Thr	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Phe	Thr	Phe	Thr
				20					25					30

Asp	Tyr	Thr	Met	Asp	Trp	Val	Lys	Gln	Ser	His	Gly	Lys	Ser	Leu
				35					40					45
Glu	Trp	Ile	Gly	Asp	Val	Asn	Pro	Asn	Ser	Gly	Gly	Ser	Ile	Tyr
				50					55					60
Asn	Gln	Arg	Phe	Lys	Gly	Lys	Ala	Ser	Leu	Thr	Val	Asp	Arg	Ser
				65					70					75
Ser	Arg	Ile	Val	Tyr	Met	Glu	Leu	Arg	Ser	Leu	Thr	Phe	Glu	Asp
				80					85					90
Thr	Ala	Val	Tyr	Tyr	Cys	Ala	Arg	Asn	Leu	Gly	Pro	Ser	Phe	Tyr
				95					100					105
Phe	Asp	Tyr	Trp	Gly	Gln	Gly	Thr	Thr	Leu	Thr	Val	Ser	Ser	
				110					115					

<210> 3
 <211> 107
 <212> PRT
 <213> artificial

<400> 3														
Asp	Ile	Gln	Met	Thr	Gln	Ser	Pro	Ser	Ser	Leu	Ser	Ala	Ser	Val
1				5					10					15
Gly	Asp	Arg	Val	Thr	Ile	Thr	Cys	Lys	Ala	Ser	Gln	Asp	Val	Ser
				20					25					30
Ile	Gly	Val	Ala	Trp	Tyr	Gln	Gln	Lys	Pro	Gly	Lys	Ala	Pro	Lys
				35					40					45
Leu	Leu	Ile	Tyr	Ser	Ala	Ser	Tyr	Arg	Tyr	Thr	Gly	Val	Pro	Ser
				50					55					60
Arg	Phe	Ser	Gly	Ser	Gly	Ser	Gly	Thr	Asp	Phe	Thr	Leu	Thr	Ile
				65					70					75
Ser	Ser	Leu	Gln	Pro	Glu	Asp	Phe	Ala	Thr	Tyr	Tyr	Cys	Gln	Gln
				80					85					90
Tyr	Tyr	Ile	Tyr	Pro	Tyr	Thr	Phe	Gly	Gln	Gly	Thr	Lys	Val	Glu
				95					100					105

Ile Lys

<210> 4
 <211> 119
 <212> PRT
 <213> artificial

<220>
 <221> artificial
 <222> 1-119
 <223> Fab 574 VH

<400> 4

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Gln Pro Gly
1 5 10 15

Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Thr
20 25 30

Asp Tyr Thr Met Asp Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
35 40 45

Glu Trp Val Ala Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr
50 55 60

Asn Gln Arg Phe Lys Gly Arg Phe Thr Leu Ser Val Asp Arg Ser
65 70 75

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
80 85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Asn Leu Gly Pro Ser Phe Tyr
95 100 105

Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
110 115

<210> 5

<211> 107

<212> PRT

<213> artificial

<400> 5

Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala Ser Val
1 5 10 15

Gly Asp Arg Val Thr Ile Thr Cys Arg Ala Ser Gln Ser Ile Ser
20 25 30

Asn Tyr Leu Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
35 40 45

Leu Leu Ile Tyr Ala Ala Ser Ser Leu Glu Ser Gly Val Pro Ser
50 55 60

Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr Ile
65 70 75

Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
80 85 90

Tyr Asn Ser Leu Pro Trp Thr Phe Gly Gln Gly Thr Lys Val Glu
95 100 105

Ile Lys

<210> 6

<211> 119

<212> PRT

<213> artificial

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Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser
20 25 30

Ser Tyr Ala Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
35 40 45

Glu Trp Val Ala Val Ile Ser Gly Asp Gly Gly Ser Thr Tyr Tyr
50 55 60

Ala Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser
65 70 75

Lys Asn Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ala Glu Asp
80 85 90

Thr Ala Val Tyr Tyr Cys Ala Arg Gly Arg Val Gly Tyr Ser Leu
95 100 105

Tyr Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
110 115

<211> 10

<213> Mus musculus

<221> unsure

<222> 10

<223> unknown amino acid

Gly Phe Thr Phe Thr Asp Tyr Thr Met Xaa
1 5 10

<211> 17

<212> PRT

<213> Mus musculus

Asp Val Asn Pro Asn Ser Gly Gly Ser Ile Tyr Asn Gln Arg Phe
1 5 10 15

Lys Gly

$\langle 211 \rangle$ 10

<212> PRT

<213> Mus musculus

Asn Leu Gly Pro Ser Phe Tyr Phe Asp Tyr
1 5 10

<210> 10
 <211> 11
 <212> PRT
 <213> Mus musculus

<400> 10
 Lys Ala Ser Gln Asp Val Ser Ile Gly Val Ala
 1 5 10

<210> 11
 <211> 7
 <212> PRT
 <213> Mus musculus

<220>
 <221> unsure
 <222> 5-7
 <223> unknown amino acid

<400> 11
 Ser Ala Ser Tyr Xaa Xaa Xaa
 1 5

<210> 12
 <211> 9
 <212> PRT
 <213> Mus musculus

<400> 12
 Gln Gln Tyr Tyr Ile Tyr Pro Tyr Thr
 1 5

<210> 13
 <211> 645
 <212> PRT
 <213> human

<400> 13
 Met Glu Leu Ala Ala Leu Cys Arg Trp Gly Leu Leu Leu Ala Leu
 1 5 10 15
 Leu Pro Pro Gly Ala Ala Ser Thr Gln Val Cys Thr Gly Thr Asp
 20 25 30
 Met Lys Leu Arg Leu Pro Ala Ser Pro Glu Thr His Leu Asp Met
 35 40 45
 Leu Arg His Leu Tyr Gln Gly Cys Gln Val Val Gln Gly Asn Leu
 50 55 60
 Glu Leu Thr Tyr Leu Pro Thr Asn Ala Ser Leu Ser Phe Leu Gln
 65 70 75
 Asp Ile Gln Glu Val Gln Gly Tyr Val Leu Ile Ala His Asn Gln
 80 85 90
 Val Arg Gln Val Pro Leu Gln Arg Leu Arg Ile Val Arg Gly Thr
 95 100 105

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Ile	Thr	Gly	Tyr	Leu 410	Tyr	Ile	Ser	Ala	Trp 415	Pro	Asp	Ser	Leu	Pro 420
Asp	Leu	Ser	Val	Phe 425	Gln	Asn	Leu	Gln	Val 430	Ile	Arg	Gly	Arg	Ile 435
Leu	His	Asn	Gly	Ala 440	Tyr	Ser	Leu	Thr	Leu 445	Gln	Gly	Leu	Gly	Ile 450
Ser	Trp	Leu	Gly	Leu 455	Arg	Ser	Leu	Arg	Glu 460	Leu	Gly	Ser	Gly	Leu 465
Ala	Leu	Ile	His	His 470	Asn	Thr	His	Leu	Cys 475	Phe	Val	His	Thr	Val 480
Pro	Trp	Asp	Gln	Leu 485	Phe	Arg	Asn	Pro	His 490	Gln	Ala	Leu	Leu	His 495
Thr	Ala	Asn	Arg	Pro 500	Glu	Asp	Glu	Cys	Val 505	Gly	Glu	Gly	Leu	Ala 510
Cys	His	Gln	Leu	Cys 515	Ala	Arg	Gly	His	Cys 520	Trp	Gly	Pro	Gly	Pro 525
Thr	Gln	Cys	Val	Asn 530	Cys	Ser	Gln	Phe	Leu 535	Arg	Gly	Gln	Glu	Cys 540
Val	Glu	Glu	Cys	Arg 545	Val	Leu	Gln	Gly	Leu 550	Pro	Arg	Glu	Tyr	Val 555
Asn	Ala	Arg	His	Cys 560	Leu	Pro	Cys	His	Pro 565	Glu	Cys	Gln	Pro	Gln 570
Asn	Gly	Ser	Val	Thr 575	Cys	Phe	Gly	Pro	Glu 580	Ala	Asp	Gln	Cys	Val 585
Ala	Cys	Ala	His	Tyr 590	Lys	Asp	Pro	Pro	Phe 595	Cys	Val	Ala	Arg	Cys 600
Pro	Ser	Gly	Val	Lys 605	Pro	Asp	Leu	Ser	Tyr 610	Met	Pro	Ile	Trp	Lys 615
Phe	Pro	Asp	Glu	Glu 620	Gly	Ala	Cys	Gln	Pro 625	Cys	Pro	Ile	Asn	Cys 630
Thr	His	Ser	Cys	Val 635	Asp	Leu	Asp	Asp	Lys 640	Gly	Cys	Pro	Ala	Glu 645